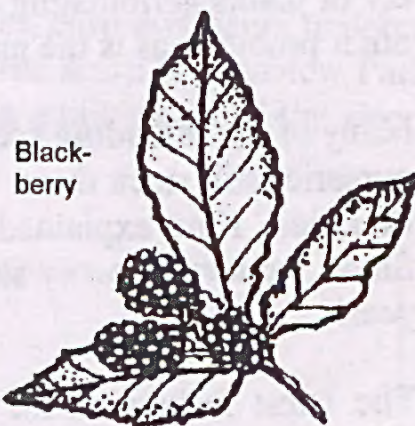


*The*

March 2004

*Ballarat*

*Naturalist*



## **Garden Plants as Invasive Weeds in Bushland**

**Speaker: Kate Blood - DPI, Beaufort.**

Kate is the Project Leader of the "Weed Alert Rapid Response" team. She is responsible for investigating the sale and spread of exotic and native plants which have "gone feral"! Kate introduced her talk by defining the phrase "environmental weed" as a plant invading a natural ecosystem, obvious ones being blackberry and freesias. It has been estimated that gardeners spend 80% of their time weeding so there is an economic incentive to avoid them in the first place.

Plants which have jumped the fence include Paterson's Curse, a plant that was "trendy" in the late 19th century; it costs agricultural enterprises \$30 million a year while Serrated Tussock costs \$50 million. Periwinkle, given to brides as the "something blue" and representing fertility, is carried down watercourses after floods and spreads like a carpet, inhibiting the growth of indigenous plants. Privet is another, this one causing allergic reactions when touched.

Australian plants in the wrong place include Cootamundra Wattle, planted as an attractive shrub, and peppercorn trees, whose seeds are carried away by birds. Olives and English broom are dreadfully invasive. The Weed Alert Response group tries to prevent weeds from becoming established in Victoria: an example is Spanish broom which can hybridise with the English variety and become even more invasive. Spanish Heath, a well-established weed, is often found on roadsides where it has probably been spread by slashers. Individual plants of ivy, an immensely adaptable plant capable of growing in harsh environments such as the sand and salt of the coast, can live for 400 years.

Fashion and trends influence the type of plants which become problems. The promotion of low water-use plants resulted in gazanias appearing along roadsides. How many farm drives are lined by Agapanthus, or creeks by Arum Lilies? Ornamental



grasses are one of the worst categories, appearing especially along rail and road reserves; Pampas grass is a serious offender—its seeds can be blown 40km. Other methods of transport include hairy seeds which cling to fur, feathers or clothing, birds eating indigestible seeds—then perching in a eucalypt and defecating, resulting in a variety of plants germinating around the tree. Dumping of garden waste in the bush is another problem, as is the movement of hay which may contain seeds.

Many of the offending species are promoted in garden books, radio and TV, and some nurseries still stock them. Legislation and education are necessary to prevent their proliferation. Kate explained how she would visit the Melbourne International Flower Show and inspect every stall to see what plants were being promoted as trendy for that year!

The latest fashion is for horsetails, an evolutionary ancient plant native to North America and being promoted for its medicinal properties. It has rhizomes which can quickly grow 100m but which also reproduces with spores, toxic to livestock. It is hard to kill and is now a prohibited import. Mexican Feather Grass was confiscated by Kate and her team as it was being wholesaled to nurseries.

However travellers bringing plant material home, and the ordering of plants via the internet continue to cause problems. Again, publicity and increasing public awareness are the keys to mitigating the problems, and Kate invited us to spread the word! Her fluent and persuasive talk, amply illustrated with appropriate slides was received by a fascinated audience—and prompted plenty of comments about weeds on the Sunday excursion!

## **Excursion to Seaview Park and Geelong Botanic Gardens**

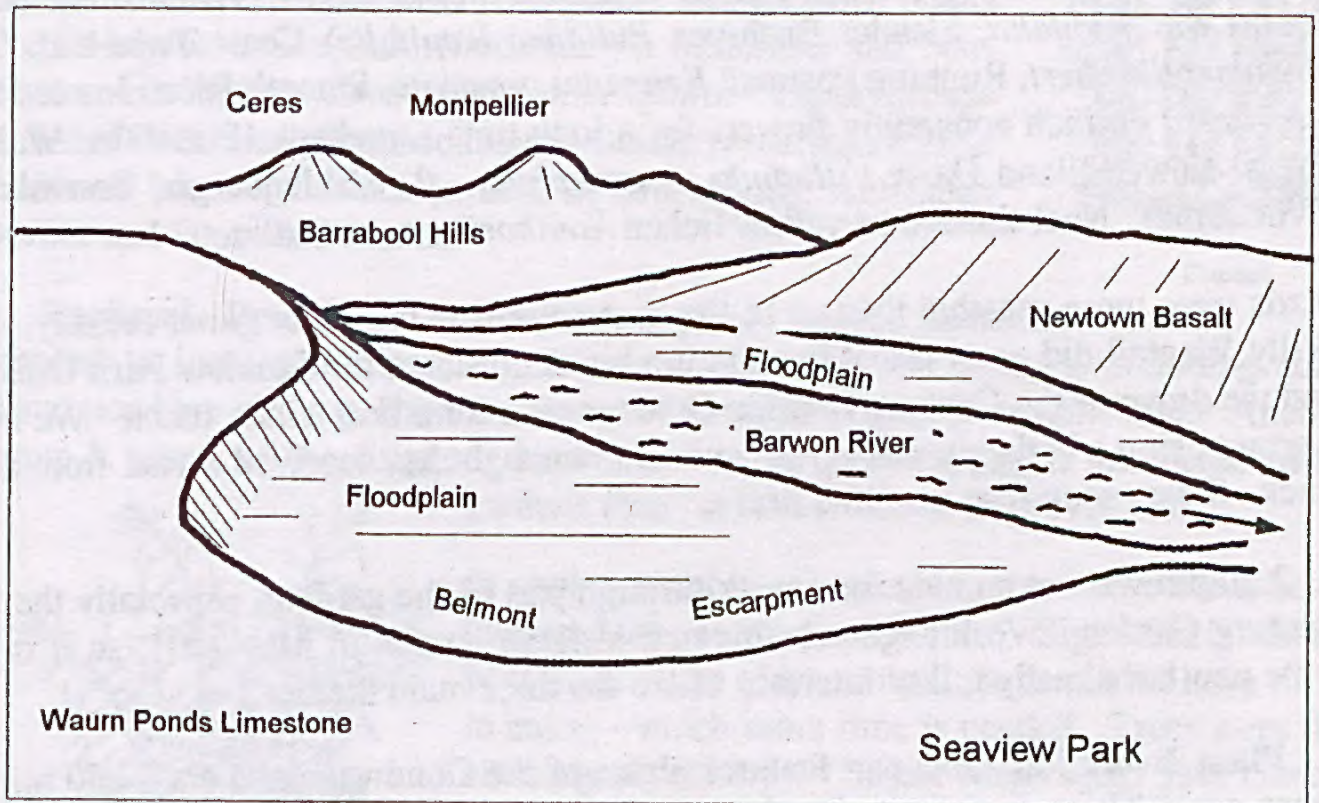
**Leaders: Noel Schleiger & Dick Southcombe (am)  
GBG Guide (pm)**

On Sunday February 8th 2004, a hot Total Fire Ban day, 10 of our members met Dick Southcombe and Noel Schleiger at Seaview Park. After a pleasant surprise of hot scones, courtesy of Shirley Southcombe, and a cuppa, Noel explained the geology of the area. The park is situated on a limestone residual with the Barwon River immediately below.

The limestone was originally the sea floor during the Oligocene period, and during the following Miocene period 20-30 million years ago, when the sea was shallow, oysters, scallops, bryozoans (mat-like colonies of polyps) and foraminifera (minute creatures with calcareous shells) lived here. Their fossils have enabled the limestone to be dated and the depth of the sea estimated. Later crustal activity and volcanic flows from Mt. Duneed and adjacent points resulted in the upthrust of the old sea floor and modification of the flow of existing rivers.



Originally the Moorabool and Barwon Rivers flowed into Corio Bay but the Lovely Banks Monocline rose (continuing the line of the Rowsley fault) and diverted the streams. Other influences on the course of the Barwon at this locality include the lava flow - basalt - visible on the opposite side of the river, currently being undercut by the river and leaving a widening floodplain beneath the scarp of Seaview Park; and the postulated Barwon Fault which may explain the straightness of the river's course at this point.



**View WNW over the Barwon Valley from Seaview Park illustrating major geological and geomorphological features.**

The Barrabool Hills away to our left consist of Cretaceous calcarenite, the same strata which outcrop at Dinosaur Cove and Inverloch where Tom Vickers-Rich has discovered polar dinosaurs. Within this formation are bluffs of Cambrian greenstone appearing as residuals, and indicating that parts of the mantle had been brought up by faulting at the end of the Cambrian period.

After Noel explained the geology of the park he joined us as we walked about the sloping hillside to find plants. Dick told us more about the reasons for keeping this small patch of significant remnant vegetation. Such grassland is rare everywhere but particularly so within Geelong. Grazing and settlement have left little. The rest of the Waurn Ponds Limestone hills are now devoid of native vegetation. The "Friends" group to which Dick belongs have already done much work and plan



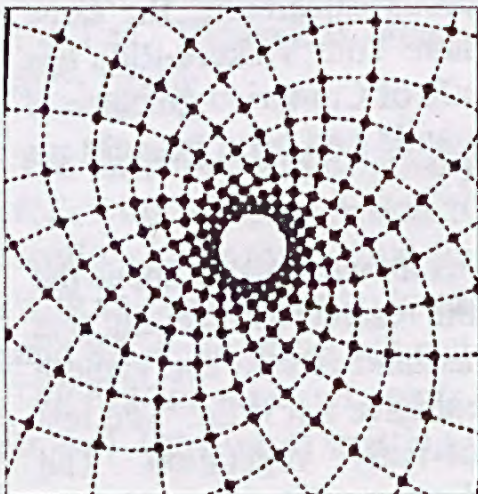
more – planting, weeding, retaining walls, maintaining a fire regime (3 year cycle) and keeping a watch over unsuitable plans.

The vegetation of the Belmont Escarpment includes a number of typically coastal species, plants not normally found inland. This is due to the site's limestone formation and its closeness to the sea in the recent geological past. We stood on limestone ground up high which was once seabed. Port Phillip Bay has only been flooded for the last 10,000 years. Plants included Boobialla-plains form *Myoporum insulare*, Hedge Wattle *Acacia paradoxa*, Kangaroo Grass *Themeda triandra*, Coast Flax Lily *Dianella brevicaulis*, Coast Fan Flower *Scaveola albida*, Coast Wirilda *Acacia retinoides* var. *uncifolia*, Slender Bush-pea *Pultanea tenuifolia*) Coast Twin-leaf *Zygothymum billardieri*, Running Postman *Kennedia prostrata*, Smooth Rice Flower *Pimelea glauca* - which apparently flowers for a long time – perhaps 10 months, Wallaby Grass, New Holland Daisy *Vittadinia megacephala* - ?, Wahlenbergia, Convolvulus (Woodbine). Noel showed us yellow lichen *Xanthoria* sp. *parietina*.

Birds were more sensible than us in the heat. We saw few throughout the day. One Willy Wagtail did greet us. After sharing his enthusiasm for Seaview Park Dick left and we drove to the Geelong Botanic Gardens area for a hot, windy lunch. We noted a group using a barbeque (fire type) and soon enough they received a visit from a fire truck. Steam soon rose from the fire.

At 2:30 pm we met a guide for a walk through part of the gardens, especially the 21st Century Garden. Work began on this new striking garden in May 2001, so it is still quite new but already full of interest. There are three main themes:

**1. Plant Evolution.** This part features plants of the Gondwanaland era – 250 million years ago. These were cone-bearing plants, non-flowering and often with separate male and female plants. Some of these were Antarctic Beech, Cycads *Cycas taitungensis*, Mountain Plum Pine *Podocarpus lawrencei*, myrtles and conifers. Some plants exhibited astonishing spiral patterns of mathematical precision and we had a quick lesson (including the guide) about these from Greg. The **spiral growth pattern** shown by the plants is the same as that on pinecones, rams horns and shells.



**spiral growth  
pattern**

(From *The Self-made Tapestry* by  
P. Ball pub. OUP  
1999)





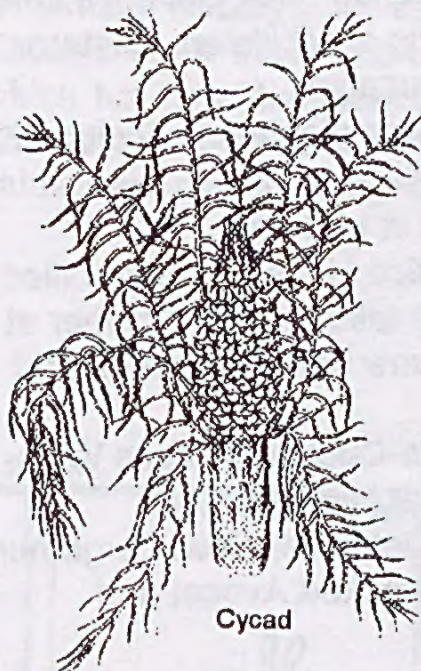
The pattern relates to the sequence of numbers described by the 13th century mathematician, Fibonacci, with the ratio between successive numbers tending to 1.618. This number is also the ratio of the sides of a rectangle referred to as the Golden Rectangle and seen in ancient architecture.

**2. Plant Adaptation.** There are many Australian native and exotic plants that have adapted to arid environments – thorns, spines, colour, texture, shape and a wide variety of mechanisms to survive long periods with minimum moisture. One section is labelled Australian Arid plants and includes plants like Stringybark She-Oak *Allocasuarina inophloia* and Narrow-leaved Fuchsia *Eremophila alternifolia*. Other groups included Rainforests and Mountains, Southern African Plants, Plants of Islands, Extinct (except in cultivation), Australian Border and Grassland Plants.



Cactus

**3. Regional Relevance** – indigenous plant species naturally adapted to local conditions, e.g. Plants of the Brisbane Ranges, including some found nowhere else e.g. Brisbane Ranges Grevillea *Grevillea steiglitziana*. Another group is plants of the Anglesea heathland – often growing bigger and better in the gardens than “at home” due to improved soil.



Cycad

In cooler weather, we plan to return here for a better look and time to read and admire. Signs and labels are well done. The older, formal gardens also have much to enjoy – much more time is needed. Trees were fascinating, especially a Chinese Maidenhair Tree *Ginkgo biloba*, Chilean Wine Palm *Jubaea chilensis* and a stand of Bunya Bunya *Araucaria bidwillii*. There are 38 trees registered in the National Trust Significant Tree Register.

The Geelong Botanic Gardens also maintain the national Pelargonium and Geranium collection. We walked along paths of camellias, ferns, flowers, roses and more. Sculpture adds interest and I’m sure seasonal variation would be lovely. The 21st Century Garden is quite different from the older section and with water becoming increasingly precious the whole educational experience is designed to stimulate interest in growing plants naturally adapted to our climate.

Claire & Peter Dalman, Carol Hall.



## **February Meeting Points**

34 members and visitors were welcomed.

- Donation to Australian Natural History Medallion Fund to be decided by Committee.
- John Gregurke to be nominated for SEANA Management Committee.
- Parks and Environment's Begonia Festival Parade volunteer unsuccessfully sought.
- Library: Fran Hanrahan encouraged people to borrow books from the library.
- AGM: call for nominations; members asked to bring up to a dozen slides on the theme "High Country".
- Reminder that next month's meeting is on March 12<sup>th</sup>, a week later than normal.
- Petition re development in Sturt Street West circulated.

## **Field Reports**

- Tony Johns: Pair of Boobook Owls with 2 fledglings at Colignan, harassed by Pied Butcherbirds and Blue-face Honeyeaters.
- Ken McDonnell: Austral Ladies' Tresses flowering at St George's Lake.
- Frank Harrap: No cuckoos heard during spring at Mt Helen. Eastern Spinebill in fuchsia. Koala droppings under eucalypt.
- Lyndsay Fink: Native animals seen in Blue Gum plantations include Koala, Eastern Grey Kangaroo and Swamp Wallaby.
- John Mildren: Echidna washed several times in bird bath.
- Carol Hall: In mid-December Black-tailed Native Hens and Blue-billed Ducks bred in North Gardens Wetland (slides taken). Late October at Lake Catani, Mt Buffalo, a Family of Kookaburra bathed in creek and then put mud under wings (slides taken).
- Belinda Taylor: Pallid Cuckoo, Shining Bronze-Cuckoo, Rufous Whistler, Sitella and Snake-necked Tortoise seen at Haddon.
- John Gregurke: Water level in Lake Burrumbeet is very low. Large numbers of Australian Shelduck, Grey Teal, Red-necked Avocet and Banded Stilt.

## **Excursion Attendance Book**

We have introduced an attendance book to be signed by members participating in excursions. Please ensure that you sign — the excursion leader or a committee member will be carrying it.



## Lunette at Lake Colongulac

Contributor: Lyndsay Fink

This item from Lyndsay could be read in relation to the lunette at Lake Corangamite seen on the Salinity excursion last year. (Newsletter August 2003)

"On the south side of Lake Colongulac there is an ancient dune. It is composed of silt from the floor of the lake; it was blown there by wind some 5,000 years ago, during an arid period when the lake was completely dry.

This silt dune is geologically historical because William Adeney, who lived there in 1843, found the first bones of giant extinct marsupials discovered in Victoria; these he sent to the British Museum. In succeeding years more bones were discovered including the first ever of the marsupial lion *Thylacoleo*. Other bones were of the Tasmanian Tiger *Thylacine* and Tasmanian Devils showing that these animals once inhabited the mainland. Because the jawbone of a Dingo was found there it was thought that man may have lived there also. However it was established that the Dingo jaw was more recent in time. Another interesting find nearby was a fossilised Aboriginal skeleton from the same arid period 5,000 years ago.

In William Adeney's day the Aboriginal people had a camp close by the mouth of Choclyn Creek which runs into the SE side of Colongulac. They had a weir across it which has now disappeared and the campsite is difficult to locate because it is grassed over. A visit to the site could prove rewarding as it has been inhabited by animals and man for many millennia."





# Calendar

## March

- Mon. 1      Committee Meeting @ Binns',      7.30pm  
 Fri.5—Mon.8      SEANA Camp-out and AGM, "Kangarooobie", Princetown.  
 Fri. 12      **AGM and Members' Slides/Photos - Theme: *High Country*.**  
 Sun. 14      Excursion: *Mineral Springs of Trentham and Lyonville*. Leader Greg Binns.  
 Thur. 25      Committee Meeting @ Helen's,      7.30pm.

## April

- Fri. 2      Dr. Jan Watson: *Beneath the Waves—the marine life of Pt. Phillip Bay*.  
 Sun. 4      Jubilee Mine. Leader Fran Hanrahan.

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### Supper Duty:

### March:

Kay Preston & Eileen Anderson

### April:

Volunteers required.

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## Committee

- President** ..... Mrs. Carol Hall  
**Vice-President**..... Mr. Greg Binns  
**Secretary** ..... Mr. John Gregurke  
**Treasurer**..... Mr. Bob Curtain

Miss Helen Burgess.....  
 Miss Maureen Christie.....  
 Mrs. Claire Dalman.....  
 Mrs. Carol Hall (Editor).....

Miss Fran Hanrahan.....  
 Mr. Les Hanrahan.....  
 Mrs. Kay Preston.....

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 Editor:

**Website:** [www.ballarat.yourguide.com.au](http://www.ballarat.yourguide.com.au) Click on *Local Info*. Search *Environment*.

**Meetings** are held at the Ballarat Horticultural Centre, cnr. Gregory & Gillies Sts (VicRoads 254 F8) on the first Friday of the month at 7.30pm.

**Excursions:** Depart from Ballarat Market Place (formerly Creswick Plaza) Creswick Rd., Ballarat (VicRoads 255 M10) at 9.30 am unless otherwise specified.

- A monthly publication of the Field Naturalists' Club of Ballarat Inc.  
 Incorporation # A0014919P